



Volunteer Lake Assessment Program Individual Lake Reports

CHESHAM POND, HARRISVILLE, NH

MORPHOMETRIC DATA

Watershed Area (Ac.):	5,056	Max. Depth (m):	3	Flushing Rate (yr ⁻¹)	24.2
Surface Area (Ac.):	74	Mean Depth (m):	1.3	P Retention Coef:	0.43
Shore Length (m):	2,900	Volume (m ³):	471,500	Elevation (ft):	1152

TROPHIC CLASSIFICATION

Year	Trophic class
1984	EUTROPHIC
2005	MESOTROPHIC

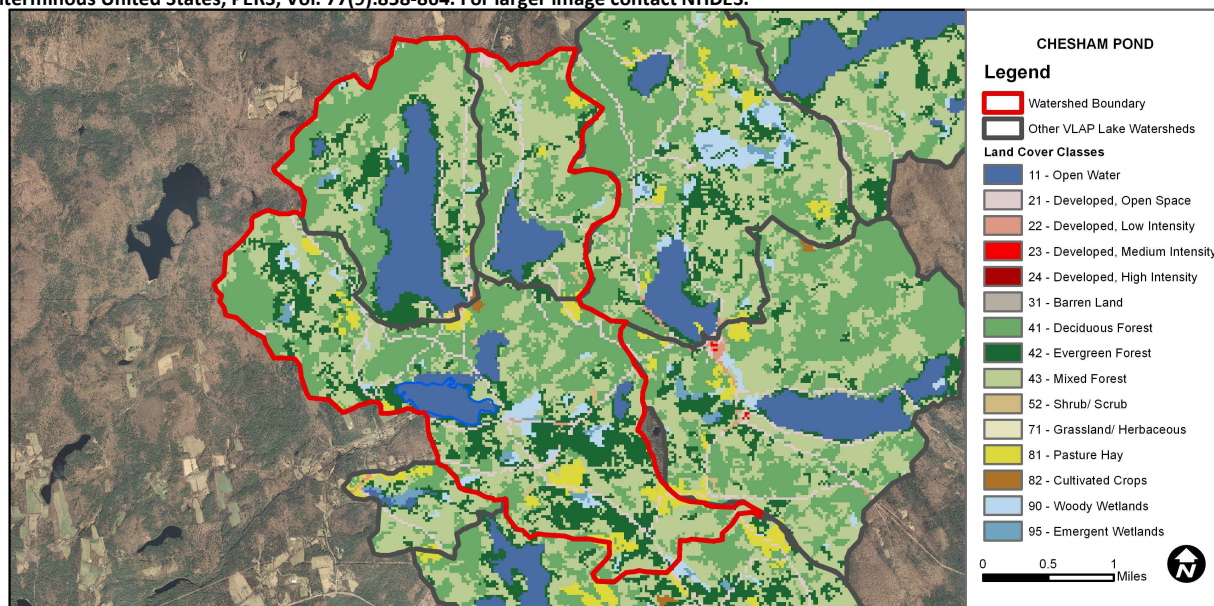
KNOWN EXOTIC SPECIES

The Waterbody Report Card tables are generated from the DRAFT 2014 305(b) report on the status of N.H. waters, and are based on data collected from 2004-2013. Detailed waterbody assessment and report card information can be found at www.des.nh.gov/organizations/divisions/water/wmb/swqa/index.htm

Designated Use	Parameter	Category	Comments
Aquatic Life	Phosphorus (Total)	Cautionary	The calculated median is fewer than 5 samples but > indicator and the chlorophyll a indicator is okay. More data needed.
	pH	Cautionary	< 10 samples and 1 exceedance of criteria. More data needed.
	Oxygen, Dissolved	Encouraging	There are < 10 samples with 0 exceedances of criteria. More data needed.
	Dissolved oxygen satura	Encouraging	There are < 10 samples with 0 exceedances of criteria. More data needed.
	Chlorophyll-a	Cautionary	The calculated median is fewer than 5 samples but > indicator. More data needed.
Primary Contact Recreation	Escherichia coli	Very Good	Where there are no geometric means, all bacteria samples are < 75% of the geometric mean. Where there are geometric means all single bacteria samples are < the SSMC and all geometric means are < geometric mean criteria.
	Chlorophyll-a	Encouraging	There are < 10 samples with 0 exceedances of indicator. More data needed.

WATERSHED LAND USE SUMMARY

Fry, J., Xian, G., Jin, S., Dewitz, J., Homer, C., Yang, L., Barnes, C., Herold, N., and Wickham, J., 2011. Completion of the 2006 National Land Cover Database for the Conterminous United States, PERS, Vol. 77(9):858-864. For larger image contact NHDES.





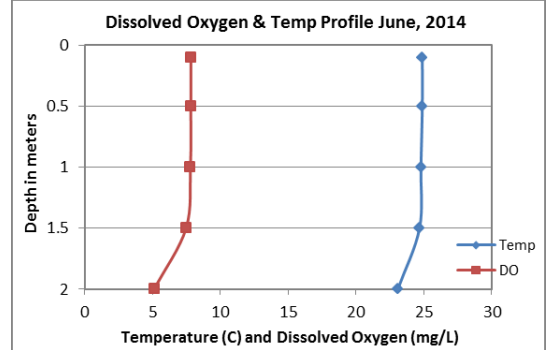
VOLUNTEER LAKE ASSESSMENT PROGRAM INDIVIDUAL LAKE REPORTS

CHESHAM POND, HARRISVILLE

2014 DATA SUMMARY

OBSERVATIONS AND RECOMMENDATIONS (Refer to Table 1 and Historical Deep Spot Data Graphics)

- ◆ **CHLOROPHYLL-A:** Chlorophyll levels were in an average range and approximately equal to the state median. Chlorophyll levels increased slightly from those measured in 2013.
- ◆ **CONDUCTIVITY/CHLORIDE:** Epilimnetic (deep spot), Chesham Inlet, Outlet, Seaver Inlet, and Sunset Hill Inlet conductivity and chloride levels were slightly greater than or approximately equal to the state medians.
- ◆ **TOTAL PHOSPHORUS:** Epilimnetic phosphorus was low, less than the state median, and decreased from that measured in 2013. Chesham Inlet, Outlet, Seaver Inlet, and Sunset Hill Inlet phosphorus levels were low and decreased from those measured in 2013.
- ◆ **TRANSPARENCY:** Transparency was good and the Secchi disk was visible on the pond bottom.
- ◆ **TURBIDITY:** Epilimnetic, Chesham Inlet, Outlet, and Sunset Hill Inlet turbidities were slightly elevated and a recent significant storm event and stormwater runoff may have contributed to the elevated turbidities. Seaver Inlet turbidity was average for that station.
- ◆ **pH:** Epilimnetic, Chesham Inlet, Outlet, and Sunset Hill Inlet pH levels were within the desirable range of 6.5-8.0 units. Seaver Inlet pH was slightly less than desirable.
- ◆ **RECOMMENDED ACTIONS:** Continue monitoring program to establish baseline water quality conditions. After ten consecutive years of data collections, historical water quality trends will be analyzed and parameters assessed to see if water quality is stable, improving or worsening. Contact the VLAP Coordinator in 2015 to conduct a sampling visit.



NH Water Quality Standards: Numeric criteria for specific parameters. Results exceeding criteria are considered a water quality violation.

Chloride: > 230 mg/L (chronic)

E. coli: > 88 cts/100 mL – public beach

E. coli: > 406 cts/100 mL – surface waters

Turbidity: > 10 NTU above natural level

pH: between 6.5-8.0 (unless naturally occurring)

NH Median Values: Median values for specific parameters generated from historic lake monitoring data.

Alkalinity: 4.9 mg/L

Chlorophyll-a: 4.58 mg/m³

Conductivity: 40.0 uS/cm

Chloride: 4 mg/L

Total Phosphorus: 12 ug/L

Transparency: 3.2 m

pH: 6.6

Station Name	Table 1. 2014 Average Water Quality Data for CHESHAM POND							
	Alk. mg/l	Chlor-a ug/l	Chloride mg/l	Cond. uS/cm	Total P ug/l	Trans. m	Turb. ntu	pH
Epilimnion	3.1	4.56		48.7	7	NVS 2.20 VS 2.20	1.34	6.57
Chesham Inlet			8	49.9	6		1.01	6.61
Outlet			8	49.6	6		1.03	6.60
Seaver Inlet			6	41.9	3		0.51	6.37
Sunset Hill Inlet			8	50.7	8		1.64	6.53

HISTORICAL WATER QUALITY TREND ANALYSIS

Parameter	Trend	Explanation	Parameter	Trend	Explanation
Conductivity	N/A	Ten consecutive years of data necessary for analysis.	Chlorophyll-a	N/A	Ten consecutive years of data necessary for analysis.
pH (epilimnion)	N/A	Ten consecutive years of data necessary for analysis.	Transparency	N/A	Ten consecutive years of data necessary for analysis.
			Phosphorus (epilimnion)	N/A	Ten consecutive years of data necessary for analysis.

